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Ontario Energy Board
P.O. Box 2319
2300 Yonge Street, Suite 2700
Toronto, ON
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Attention: Kirsten Walli, Board Secretary

Dear Ms. Walli:

RE: EB-2006-0226 PROPOSED AMENDMENTS TO THE DSC AND RSC

Rodan Energy and Metering Solutions Inc. ("Rodan") is a leading provider of engineering, metering and energy monitoring services for power producers, distributors and consumers. As a Metering Service Provider ("MSP") licensed by the Independent Electricity System Operator, Rodan has connected hundreds of facilities for power producers in Ontario to both the transmission and distribution system. We have reviewed the proposed amendments to the Distribution System Code ("DSC") and the Retail Settlement Code ("RSC") and are pleased to offer the following comments and suggestions:

1. Standardization, Consistency and Clarity

The DSC sets the minimum obligations that a licensed electricity distribution company ("LDC") must meet in carrying out its obligations within its Service Area under its licence. Generators have often expressed their frustration with the lack of standardization, consistency and clarity with regards to procedures and requirements for generators connecting to distribution systems. LDC Conditions of Service should be standardized, as much as practical, on such matters as metering.

We recommend that the Board focus on standardization of requirements, such as metering, that will assist generators in connecting to and monitoring their distribution connected facilities.

2. Generation Connection Guide

In order to facilitate the connection of embedded generation facilities, we recommend that distributors make available to prospective generators a Generation Connection Guide. Rodan has recently developed such a guide for Orangeville Hydro and the CHEC Group of utilities, which has been well received by generators and regulators. The Guide consolidates the information available in the various Codes and documents including the distributors Conditions of Service manual.

The Guide should contain an overview of the transmission and distribution system, step by step instructions for connection, rights and obligations, protection, safety, power quality, impact assessments and other technical issues related to new generation.

We recommend that LDCs make available to prospective generators a Generation Connection Guide.

3. Connection Impact Assessment

In many situations, the embedded generator is connecting to a feeder that originates from the host LDC transformer station (e.g. Hydro One). In such instances, the generator requires two connection impact assessments — one for the LDC to which the generator is embedded and the second assessment from Hydro One. This could lead to a duplication of effort and additional cost to the generator since both the LDC and host LDC has to model all the same parameters to determine the impact on their respective systems.

We recommend that language be included in the DSC that clearly delineates the responsibility and the allocation of costs for carrying out connection impact assessments for generators that affect both embedded and host LDCs.

4. Metering

- (a) The proposed section 5.2.1 of the DSC indicates that a distributor require a generator of 10MW or less to install metering having regard to the meter data requirements for settlement and to the fuel type and technology of the embedded generation facility. We do not see a reason to differentiate on metering depending on the fuel type and technology. As a benefit to both distributors and generators, further details are necessary to clarify the fuel type and technology criteria proposed in this section.
- (b) Metering requirements and specifications can vary dramatically based upon the capacity, annual output and dynamic range of the generator as these are the factors that have the largest impact on the distribution system. Consideration as to whether a four quadrant meter is required should be given further consideration. Without such a device, the generator will receive a netted payment and will not receive the differential benefit of the cost of power consumed versus price of power produced. Consistency as to the type of metering standard should be clearly defined and developed based on further consultations with industry stakeholders.
- (c) Metering for generators is particularly complex and can have a significant impact on settlement for a LDC. The Board states several times that the cost of metering is a barrier to entry without fully explaining its rationale. In our experience, the average cost of metering for a generator is traditionally no more than 0.5% of the total cost of the generating facility. Furthermore, metering is more than simply installing a meter. Engineering calculations, conductors, transformers and other factors impact the settlement. A poorly metered generator can contribute to significant errors for both the distributor and generator. Proper metering is not onerous and is an important tool for both generators and LDCs, especially where the average 5MW Standard Offer generator will likely generate well over \$1 million in annual revenue.
- (d) The proposed wording in Section 5.2.1 that a generator with a “capacity of 10 MW or less install such metering as may reasonably be required” creates

significant ambiguity and inconsistency across Ontario. We recommend that a minimum standard be established based upon nameplate ratings and that generators have the option to install equipment that meets or exceeds such standards.

- (e) In the event metering data become unavailable or lost due to meter trouble or failure, the DSC should clearly define settlement implications for the generator.
- (f) Responsibility for ownership, installation and maintenance should be clearly defined as the responsibility of the generator and provided through a licensed MSP. This requirement is prevalent, although inconsistent throughout LDC Conditions of Service and should become part of the DSC. For example, Hydro One's Conditions of Service state (page 74) "An Embedded Generator that may, at any time deliver power to the Distribution System for the purposes of selling electricity shall be responsible for the ownership, installation and maintenance (using a Registered Metering Service Provider), of an approved meter."

The benefits to a generator of being responsible for the meter using a licensed MSP are significant. A knowledgeable MSP can guide the generator in facility registration and connection; assist in making an informed decision about the metering design that maximizes their return; and provides the LDC with the comfort that a knowledgeable and regulated MSP is designing, installing, certifying engineering calculations and maintaining equipment to ensure accurate settlement and monitoring. By controlling the metering assets, generators not only will have a choice of service provider, they will also have options as to the type of metering equipment (provided it meets certain minimum standards) in order to satisfy their monitoring and control requirements. Generators that own their metering, often leverage that equipment to remotely monitor, control and acquire relevant data. This capability saves costs as generators do not require redundant equipment as the same revenue meter often has capabilities for monitoring power quality, operations, alarming, reporting and collecting data for steam, gas, water and other commodities.

Rodan is pleased to be a part of these consultations. We expect that our comments will facilitate the connection of embedded generation facilities to distribution systems by providing standardization, consistency and clarity to the DSC. We would be pleased to discuss our comments in further detail with the Board.

Yours very truly,
RODAN ENERGY & METERING SOLUTIONS INC.

A handwritten signature in black ink, appearing to read "Paul M. Grod". The signature is stylized with a large, sweeping initial "P" and "G".

Paul M. Grod
President